

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Form PTO-1449 (Modified)  
(Use several sheets if necessary)

Sheet

1

of

6

**COMPLETE IF KNOWN**

Application Number	09/882,293
Confirmation Number	7059
Filing Date	June 15, 2001
First Named Inventor	Kyle M. Hanson
Group Art Unit	1753
Examiner Name	Arun S. Phasge
Attorney Docket No.	29195-8159US

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No.	U.S. Patent or Application		Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		NUMBER	Kind Code (if known)			
Ad		09/679,928	/	Woodruff et al.	10/05/00	
		60/129,055	/	McHugh	04/13/99	
		60/143,769	/	McHugh	07/12/99	
		60/182,160	/	McHugh et al.	02/14/00	
		60/206,663	/	Wilson et al.	05/24/00	
		*2002/0008037		Wilson et al.	01/24/02	
		2002/0125141		Wilson et al.	09/12/02	
		2002/0139678		Wilson et al.	10/03/02	
		*1,526,644		Phinney	02/17/25	
		*1,881,713		Laukel	10/11/32	
		2,256,274		Boedecker et al.	09/16/41	
		*3,664,933		Clauss	05/1972	
		*3,706,635		Kowalski	12/1972	
		*3,716,462		Jensen	02/1973	
		*3,878,066		Dettke et al.	04/1975	
		*3,930,963		Polichette t al.	01/06/76	
		*4,000,046		Weaver	12/28/76	
		*4,046,105		Gomez	09/06/77	
		*4,134,802		Herr	01/16/79	
		*4,304,641		Grandia et al.	12/08/81	
		*4,384,930		Eckles	05/24/83	
		*4,437,943		Beck et al.	03/20/84	
		4,451,197		Lange	05/29/84	
		4,495,453		Inaba et al.	01/22/85	
		*4,500,394		Rizzo	02/19/85	
Ad		4,566,847		Maeda et al.	01/28/86	

RECEIVED  
FEB 10 2004

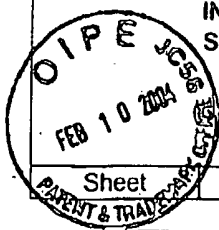
EXAMINER

*A Phasge*

DATE CONSIDERED

2/23/04

\*EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application(s).



**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Form PTO-1449 (Modified)  
(Use several sheets if necessary)

Sheet

2

of

6

**COMPLETE IF KNOWN**

Application Number	09/882,293
Confirmation Number	7059
Filing Date	June 15, 2001
First Named Inventor	Kyle M. Hanson
Group Art Unit	1753
Examiner Name	Arun S. Phasge
Attorney Docket No.	29195-8159US

**RECEIVED**  
FEB 19 2004

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No.	U.S. Patent or Application		Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		NUMBER	Kind Code (if known)			
JCS		*4,576,689		Makkaev et al.	03/18/86	
		*4,634,503		Nogavich	01/06/87	
		4,639,028		Olson	01/27/87	
		*4,648,944		George et al.	03/10/87	
		4,670,126		Messer et al.	06/02/87	
		4,760,671		Ward	08/02/88	
		4,761,214		Hinman	08/02/88	
		4,770,590		Hughes et al.	09/13/88	
		*4,781,800		Goldman et al.	11/01/88	
		*4,828,654		Reed	05/09/89	
		*4,902,398		Homstad	02/20/90	
		4,944,650		Masumoto	07/31/90	
		*4,949,671		Davis et al.	08/21/90	
		*4,959,278		Shimauchi et al.	09/25/90	
		*4,988,533		Freeman et al.	01/29/91	
		*5,000,827		Schuster et al.	03/19/91	
		*5,096,550		Mayer et al.	03/17/92	
		*5,115,430		Hahne et al.	05/19/92	
		*5,135,636		Yee et al.	08/04/92	
		*5,138,973		Davis et al.	08/18/92	
JCS		*5,151,168		Gilton et al.	09/29/92	
		5,156,174		Thompson et al.	10/20/92	
		*5,156,730		Bhatt et al.	10/20/92	
		5,178,512		Skrobak	01/12/93	
		*5,209,817		Ahmad et al.	05/11/93	
		*5,217,586		Datta et al.	06/08/93	

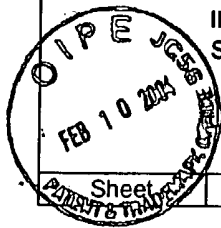
EXAMINER

*A Phasge*

DATE CONSIDERED

2/23/04

\*EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application(s).



**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Form PTO-1449 (Modified)  
(Use several sheets if necessary)

Sheet

3

of

6

**COMPLETE IF KNOWN**

Application Number	09/882,293
Confirmation Number	7059
Filing Date	June 15, 2001
First Named Inventor	Kyle M. Hanson
Group Art Unit	1753
Examiner Name	Arun S. Phasge
Attorney Docket No.	29195-8159US

RECEIVED  
FEB 19 2004

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No.	U.S. Patent or Application		Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		NUMBER	Kind Code (if known)			
PSP		5,222,310		Thompson et al.	06/29/93	
		5,227,041		Brogden et al.	07/13/93	
		*5,256,274		Poris	10/26/93	
		*5,302,464		Nomura et al.	04/12/94	
		*5,344,491		Katou	09/06/94	
		*5,368,711		Poris	11/29/94	
		*5,372,848		Blackwell et al.	12/13/94	
		*5,376,176		Kuriyama	12/27/94	
		5,377,708		Bergman et al.	01/03/95	
		*5,391,285		Lytle et al.	02/21/95	
		5,442,416		Tateyama et al.	08/15/95	
		5,460,478		Akimoto et al.	10/24/95	
		*5,472,502		Batchelder	12/05/95	
		*5,549,808		Farooq et al.	08/27/96	
		5,571,325		Ueyama et al.	11/05/96	
		*5,597,460		Reynolds	01/28/97	
		*5,639,316		Cabral, Jr. et al.	06/17/97	
		5,670,034		Lowery	09/23/97	
		*5,681,392		Swain	10/28/97	
		*5,684,713		Asada et al.	11/04/97	
		5,700,127		Harada et al.	12/23/97	
		*5,723,028		Poris	03/03/98	
		*5,754,842		Minagawa	05/19/98	
		5,759,006		Miyamoto et al.	06/02/98	
		5,765,889		Nam et al.	06/16/98	
		5,785,826		Greenspan	07/28/98	

EXAMINER

A Phasge

DATE CONSIDERED

2/23/04

\*EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application(s).



**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Form PTO-1449 (Modified)  
Use several sheets if necessary)

Sheet

4

of

6

**COMPLETE IF KNOWN**

Application Number	09/882,293
Confirmation Number	7059
Filing Date	June 15, 2001
First Named Inventor	Kyle M. Hanson
Group Art Unit	1753
Examiner Name	Arun S. Phasge
Attorney Docket No.	29195-8159US

RECEIVED  
FEB 19 2004

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No.	U.S. Patent or Application		Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		NUMBER	Kind Code (if known)			
<i>AP</i>		*5,871,626		Crafts et al.	02/16/99	
		*5,882,498		Dubin et al.	03/16/99	
		*5,908,543		Matsunami et al.	06/01/99	
		*5,932,077		Reynolds	08/03/99	
		5,980,706		Bleck et al.	11/09/99	
		5,985,126		Bleck et al.	11/16/99	
		*5,989,397		Laube et al.	11/23/99	
		*5,989,406		Beetz, Jr. et al.	11/23/99	
		*5,999,886		Martin et al.	12/07/99	
		6,004,828		Hanson	12/21/99	
		*6,027,631		Broadbent	02/22/00	
		*6,028,986		Song	02/22/00	
		*6,074,544		Reid et al.	06/13/00	
		*6,090,260		Inoue et al.	07/18/00	
		6,091,498		Hanson et al.	07/18/00	
		*6,110,346		Reid et al.	08/29/00	
		*6,151,532		Barone et al.	11/21/00	
		6,156,167		Patton et al.	12/05/00	
		*6,159,354		Contolini et al.	12/12/00	
		*6,162,344		Reid et al.	12/19/00	
		*6,162,488		Gevelber et al.	12/19/00	
		6,168,695		Woodruff et al.	01/02/01	
		*6,179,983		Reid et al.	01/30/01	
		*6,193,859		Contolini et al.	02/27/01	
		*6,199,301		Wallace	03/13/01	
<i>AP</i>		*6,228,232		Woodruff et al.	05/08/01	

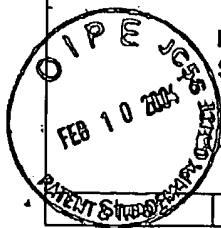
EXAMINER

*A Phasge*

DATE CONSIDERED

2/23/04

\*EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application(s).

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**Form PTO-1449 (Modified)  
Use several sheets if necessary)

5

of

6

**COMPLETE IF KNOWN**

Application Number	09/882,293
Confirmation Number	7059
Filing Date	June 15, 2001
First Named Inventor	Kyle M. Hanson
Group Art Unit	1753
Examiner Name	Arun S. Phasge
Attorney Docket No.	29195-8159US

RECEIVED  
FEB 19 2004**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No.	U.S. Patent or Application		Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		NUMBER	Kind Code (if known)			
AP		6,234,738		Kimata et al.	05/22/01	
		*6,277,263		Chen	08/21/01	
		6,322,677		Duncan	11/27/01	
		6,481,956		Hofmeister	11/19/02	
AP		*6,497,801		Woodruff et al.	12/24/02	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No.	Foreign Patent or Application			Name of Patentee or Applicant of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	NUMBER	Kind Code (if known)				
AP		WO	00/02808	/	Semitool, Inc.	01/20/00		
		WO	*00/61498		Semitool, Inc.	10/19/00		
		WO	*00/61837		Semitool, Inc.	10/19/00		
		WO	01/90434	/	Semitool, Inc.	11/29/01		
		WO	02/099165	/	Semitool, Inc.	12/12/02		
		WO	02/097165	/	Semitool, Inc.	12/05/02		
		WO	*02/02808		Semitool, Inc.	01/20/00		
AP		WO	*02/045476		Semitool, Inc.	06/13/02		

**OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published.	T
AP		*LEE, TIEN-YU TOM et al., "Application of a CFD Tool in Designing a Fountain Plating Cell for Uniform Bump Plating of Semiconductor Wafers," IEEE Transactions On Components, Packaging and Manufacturing Technology - Part B, February 1996, pp 131-137, Vol 19, No. 1, IEEE	
AP		LOWENHEIM, FREDERICK A., "Electroplating," January 1979, 12 pgs, McGraw-Hill Book Company, USA	

EXAMINER

A Phasge

DATE CONSIDERED

2/23/04

\*EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application(s).



**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Form PTO-1449 (Modified)  
Use several sheets if necessary)

Sheet 6 of 6

**COMPLETE IF KNOWN**

Application Number	09/882,293
Confirmation Number	7059
Filing Date	June 15, 2001
First Named Inventor	Kyle M. Hanson
Group Art Unit	1753
Examiner Name	Arun S. Phasge
Attorney Docket No.	29195-8159US

**OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published.	T
		*RITTER, G., et al., "Two-And Three-Dimensional Numerical Modeling of Copper Electroplating for Advanced ULSI Metallization," June 1999, 13 pgs, E-MRS Conference Symposium M. <i>Basic Models to Enhance Reliability</i> , Strasbourg, France	
		PCT International Search Report for PCT/US02/17840, Applicant: Semitool, Inc., March 2003, 5 pgs	

RECEIVED  
FEB 19 2004

EXAMINER		DATE CONSIDERED	2/23/04
*EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application(s).			